THE NAUTILUS.

ON THE OCCURRENCE OF UNIO COMPLANATUS SOL., IN MICHIGAN.

BY BRYANT WALKER, DETROIT, MICH.

The first catalogue of Michigan shells was published by Dr. Abram Sager, in 1839. The second by Dr. Manly Miles appeared in the "Report of the Geological Survey" for 1860. In each of these lists Unio complanatus Sol., is cited as a resident of the State, but in neither is any information given as to the exact locality where the species had been, or could be, found. In the several catalogues which have been compiled since that time, no reference is made to the species; and it seems to have been entirely unknown to recent collectors, as an inhabitant of the State.

Such was the condition of things when I gathered together the materials for my Catalogue of Michigan Shells, published in 1879 in the *Journal of Conchology* (Vol. ii, p. 325). That the species was really to be found within our limits seemed, in view of what was known of its distribution, very doubtful. It is peculiarly an eastern species. Exceedingly abundant in all streams flowing into the Atlantic, from Florida to Maine, like its associated species Goniobasis virginica Gm., its range westward was known to be very limited. It had not been found at all in waters tributary to the Mississippi, nor in any of the States bordering on the great lakes (excluding Sager & Miles' citation) west of New York. There was no record of its occurrence in any of the great lakes themselves, nor in their connecting rivers west of the Niagara river. It did not appear to be among the species found by Dr. Gould on the north shore of Lake Superior.

In view of all these facts I felt justified in doubting the identification of the specimens referred to this species by Sager and Miles, especially as G. virginica Gm. also appeared in their lists, and with entire confidence expressed the opinion that the citation was "evidently a mistake."

Since that time, however, the researches of the Canadian naturalists have shown that the species has a wide range through British America, extending as far west as Manitoba. But until within the last year, no evidence had been received tending to show a similar range through the States south of the great lakes. In the summer of 1888, Dr. M. L. Leach of Traverse City, Michigan, while exploring Ocqueoc Lake in Presque Isle County, Michigan, found a Unio in abundance, which proves to be U. complanatus. His account of this "find" is as follows:

"In a nameless brook that drains a small lake into the Ocqueoc from the north, I found great numbers of the Unio referred to. You know I had hopes of finding a 'giant clam shell,' and shell heaps made by some primitive people in the Ocqueoc. I found the heaps, which are only beds of shells, not more than six inches in depth, and seldom more than two or three square yards in area, scattered irregularly about over a few square rods of ground. They are on dry land a few rods from the brook, are very old, and are evidently the refuse from the camps of some primitive people who ate the clams. I could find in them only the one species of Unio, now existing in the brook. Smaller collections of refuse shells are seen at other points on the banks of the lake, but all consisting exclusively of this one Unio. So much for a sensational newspaper story."

These facts show that the colony of U. complanatus thus discovered is one of ancient origin, though apparently of limited extent. How it came to be there is a very interesting question. The very considerable labors of our collectors in other parts of the State, especially through the southern and western portions, have failed to discover the species elsewhere. The existence of this isolated colony. far from any other known locality where it is found, is one of those peculiar facts of distribution which arrest the attention, and challenge investigation. It may be considered practically assured that the species does not occur in the southern portion of the State which has been most thoroughly worked over. Should future explorations find the species inhabiting the streams of the upper peninsula and the more northern counties of the lower peninsula the explanation would be obvious. But until that is known, all is conjecture, except the fact that the species does inhabit the Ocqueoc and its tributaries and is entitled to admission to the fauna of Michigan.

DESCRIPTION OF HELIX (TRACHIA) DENTONI N. SP.

BY JOHN FORD, PHILADELPHIA.

Shell small, depressed, umbilicate, rather thin, shining; color corneous-brown, encircled above the periphery by a faint brown